



Helping Farmers Stay Alive & Well

A partnership of

- The University of Iowa
- Iowa State University
- Iowa Department of Public Health
- Iowa Department of Agriculture and Land Stewardship



IOWA'S CENTER FOR AGRICULTURAL SAFETY AND HEALTH

2002 Annual Report

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Vision Statement

To make Iowa the world's healthiest and safest agricultural environment in which to live and work through creative leadership and collaboration among I-CASH, its partners and Iowa's agricultural community.

Mission Statement

The Mission of I-CASH is to enhance the health and safety of Iowa's agricultural community by establishing and coordinating prevention and education programs.

2002 I-CASH Annual Report

Editor: Kay Mohling

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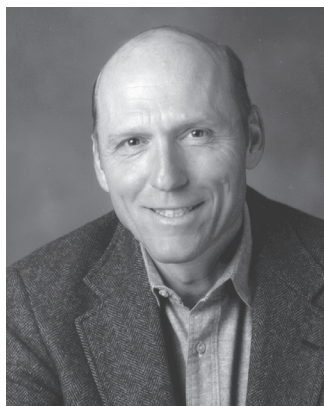
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Opening Thoughts From The Director

By Kelley J. Donham, MS, DVM

Director, Iowa's Center for Agricultural Safety and Health

On Laying Eggs, and Hatching Chicks



When someone, usually in a sporting event context, has a really bad game, one may hear from the peanut gallery, "So and so really laid an egg tonight." Those of us connected with agriculture know that laying an egg can be a productive thing. The idea for the AgriSafe Network "egg" came out of a sabbatical leave I took in Sweden during the academic year of 1984-1985. I worked with the Swedish organization Lantbrukshalsan, directly translated as "Farmers Health", that provided preventive occupational health services to farmers. Upon returning from Sweden, I wanted to start a program here in Iowa that utilized some of the Swedish concepts.

I shared this idea with David Osterberg, Chair of the House Agricultural Committee at that time. With David's leadership, the legislature funded a pilot program and we established two clinics in 1987. These clinics demonstrated the need and feasibility for a larger program. This success of the pilot clinics led to the 1990 legislation creating I-CASH, which provided a broader and more encompassing home for the clinic program, as well as a source to generate and coordinate additional preventive programs for the state's farmers. I-CASH nurtured and hatched additional ideas from the legislature that grew and developed other programs. In 1990, Carolyn Sheridan became the coordinator of the clinic program, and it was renamed the AgriSafe Network in 1997. As of this year, 25 "chicks" have hatched from the idea born in 1985. Development has grown to other states, including interests in Illinois, Nebraska, Wisconsin, Virginia, and Texas.

In order to facilitate continued growth of the AgriSafe Network, the idea of laying a new egg developed about 18 months ago. Natalie Roy, (an I-CASH staff person, now living in Maryland), suggested that AgriSafe may do well as a separate not-for-profit organization. This egg began to incubate, and in October of 2002 the first organizational meeting of this new not-for-profit organization was held in Des Moines. The new chick is hatched! The first president is Jean Hirth, Vice President is Charlotte Halvorson, and Kelley Donham is Secretary/Treasurer.

We are very excited about this new chick. Although we anticipate growth and further independence, AgriSafe will continue to have a close association with "mother hen" I-CASH, who will continue to support, provide education, evaluation and research for the newly established organization.

Having chicks on the ground is very exciting and satisfying indeed. AgriSafe is not the first egg that I-CASH has helped to hatch. I-CASH facilitated the hatching of Sharing Help Awareness United Network (SHAUN), which is doing great work assisting families in emotionally stressful times. Furthermore, I-CASH facilitated the organization Farm Safety 4 Just Kids, now an international organization with some 150 chapters. I-CASH also laid the eggs for Farm Safety Day Camps and the Certified Safe Farm. Carolyn Sheridan, with help from Wellmark and Progressvie Farmer, hatched Farm Safety Day Camps to a national program. Certified Safe Farm is still incubating, but we look forward to hatching that chick soon.

I-CASH is proud to have been a part in helping to hatch these new programs. We are certain they will be a big part in the future of the I-CASH motto, "Helping Farmers Stay Alive and Well."

I-CASH Partner Programs

The following are brief descriptions of major activities of the four I-CASH inter-institutional partners (The Iowa Department of Agriculture and Land Stewardship, Iowa State University, The University of Iowa and the Iowa Department of Public Health).

Iowa Department of Agriculture and Land Stewardship

Pesticide Applicator Certification

The Iowa Department of Agriculture and Land Stewardship (IDALS) in cooperation with the Iowa State University Extension (ISUE) and the U.S. Environmental Protection Agency (EPA) conducts the pesticide applicator certification program. Private pesticide applicators are certified to apply Restricted Use Pesticides and Commercial Pesticide Applicators are certified to apply General and Restricted Use Pesticides. As of June 30, 2002, Iowa had 11,428 certified commercial applicators, 508 certified commercial handlers, and 29,018 certified private applicators. Approximately 180 private and 270 commercial continuing instruction certification training sessions will be offered in fiscal year 2003 (July 1, 2002 to June 30, 2003).

Worker Protection Standard

The Worker Protection Standard (WPS) for agricultural pesticides is a regulation issued by the U.S. Environmental Protection Agency (EPA). The WPS emphasizes educating agricultural employers on farms, forests, nurseries, and greenhouses of the need to train their workers and pesticide handlers regarding the safe use of pesticides. With matching funding from EPA, IDALS and ISUE, WPS training materials have been developed and distributed, and presentations have been offered for agricultural employers concerning their responsibilities to their employees. ISUE revised a training video for IDALS that provides training for greenhouse, nursery, and fruit and vegetable growers on how to comply with the WPS and protect the health and safety of their employees that work in pesticide treated areas. IDALS continued to provide the EPA's fifth edition of the *Recognition and Management of Pesticide Poisonings* manuals to I-CASH for distribution to health care providers in Iowa.

Iowa Department of Public Health

Agricultural Injury Registry (SPRAINS)

The Sentinel Project Researching Agricultural Injuries (SPRAINS) began in 1990. All injuries incurred on a farm, by any farmer, farm worker, farm family member, or other individual or off the farm injuries related to producing, transporting, handling, processing, or warehousing farm commodities are reported. Data are analyzed for annual reports and provided upon request to persons or groups interested in farm safety and to provide alerts on hazardous situations.

Iowa's trauma system went on-line January 1, 2001 following a four-year implementation period and prior to implementation, a five-year planning period. The Iowa Department of Public Health is designated as the lead agency responsible for the development, implementation, and evaluation of the system. The Bureau of Emergency Medical Services, under the Division of Administration and Regulatory Affairs has coordinated the system to date.



Farm Safety Program

The activities of the Iowa State University Extension farm safety program are directed towards three major objectives and the accomplishments are listed by these objectives.

Increasing farm safety awareness with the intent of encouraging farmers to adopt safe farming practices.

- *□ "The Mystery Club" is a completed series of six publications developed and printed by ISU Extension. This publication series, designed to be used in farm safety day camps, has received an educational award from ASAE and a gold award from ACE.
- *□ ISU Extension organized articles on farm safety issues by involved partners (FaRM, FS4JK, GPCAH, ICASH, IDPH, IFSC, ISU, NECAS, NSC, and SHUAN) and distributed them to Iowa's newspapers during the National Farm Safety and Health Week September 15-21, 2002.
- *□ The Safe Farm Radio program produced and distributed 52 weeks of broadcast-quality four-minute interviews for 68 radio stations.
- *□ Several journals and periodicals carried safety articles with information supplied by extension staff.

Reducing the number of farm-related injuries and fatalities:

- *□ ISU Extension staff in 8 counties offered tractor



Lawn mowing safety education for youth.

safety training courses to 119 youth (14 and 15 year olds) during 2002. This training fulfills the federal 24 hours requirement to obtain certification for youth employment.

- *□ Safety day camps conducted by extension staff were held throughout the state. A total of 31 counties participated reaching 5,245 youth with their educational messages.
- * A total of 25 county extension offices provided an in-school farm safety program. These programs delivered safety materials and education to 5,396 children.
- *□ Non-youth safety meetings that reached 1,187 adults were conducted in 8 counties by extension staff.

Enhancing the efficiency of Iowa State University Extension to provide farm safety programming:

- *□ The □ World □ Wide □ Web □ home □ pages www.ae.iastate.edu/safety.htm and www.tmvc.iastate.edu were maintained. These pages provide valuable farm safety resources.
- * A monthly electronic farm safety newsletter was produced and distributed to more than 118 educators.
- *□ Nine of the 36 single-page Safe Farm fact sheets and two of the Mystery Club publications were updated and reprinted.

Iowa Concern Hotline

Calls at the Iowa Concern Hotline have held fairly steady for the 2001-2002 year. We have seen an increase in the number of farm families who have accessed the line this past year. More of those farm families are feeling pressure to make some tough choices about their farm operation. It may be to find another crop alternative, find another job (some parts of Iowa have seen layoffs, so a second or third job the farm family held has now been eliminated), or to get out of farming all together.

Other issues that we have heard from farm families have included: legal problems with a divorce or child custody, the Iowa fence law, legal issues over a contract, problems with family conflict on an intergenerational farm, questions about the new farm bill, communication problems with leases and landlords, and financial problems.

We have been fortunate to access two different funds for mental health counseling for farm and rural families this year. One is the Sowing the Seeds of Hope grant, which has provided money for farm families. Iowa Concern has the list of providers and issues vouchers for people to receive up to five free counseling sessions. The second grant is the Iowa Rural Mental Health Initiative and provides up to five free counseling sessions to rural families. They do not need a voucher through Iowa Concern for this grant. Iowa Concern and Extension offices have the list of providers; which are mostly Community Mental Health Centers throughout Iowa.

Iowa Concern has updated their web site this year, the address is www.extension.iastate.edu/iowaconcern. We are receiving approximately 3600 hits a month on the site. It has lots of FAQs, links to other organizations and agencies, success stories from persons who have accessed mental health facilities, and a "Live person" chat to talk directly with stress counselors.

Iowa Concern is also available 24/7 by calling 1-800-447-1985. Information & Referral, stress counseling, and legal education is available. Iowa Concern is a part of Iowa State University Extension.

Pest Management and the Environment

Federal and State laws require that all people who purchase and apply restricted-use pesticides and any applicator that applies pesticides for hire be certified according to established standards. Ninety-nine percent of Iowa row crop acres are treated with pesticides each year (1995 data), which amounts to over 22 million acres statewide. From our efforts, applicators learn to safely and more effectively apply pesticides to minimize human exposure, non-target plant, animal, and environmental risk.

Objective

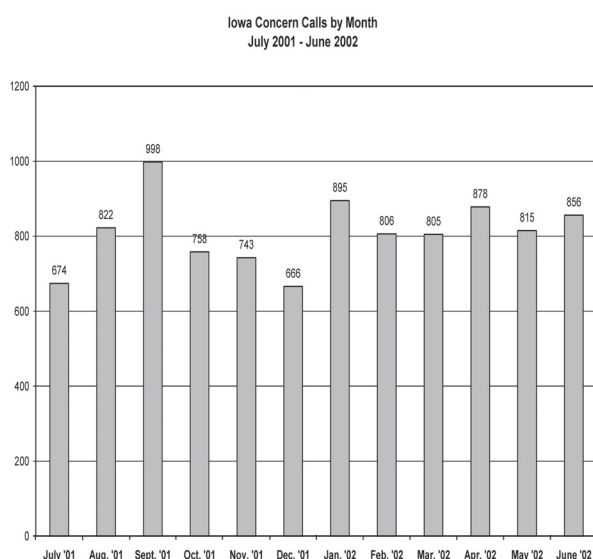
To provide training and educational materials to more than two-thirds of the commercial and private pesticide applicators in Iowa.

Activities/Outputs

The FY2002 private recertification program provided information about water quality issues and conservation buffers, pesticide security, endangered species, and several pest management topics. During the 2001-2002 pesticide applicator training season, field and state extension staff conducted training for 8,371 commercial applicators statewide. During the same time period, 326 statewide meetings were held with at least 20,157 private pesticide applicators in attendance.

Impacts/Outcomes for Private Program

Storage and disposal of pesticides was discussed during training. The applicators were asked if as a result of training they would review the storage and disposal section of the pesticide label before using it. A total of 92% indicated that they had adopted or would adopt this practice as a result of training. A second question asked if they would consider the water solubility of the herbicides that they plan to use before making product selection. Eighty-four percent already or planned in the future to consider the water solubility. The applicators were asked if they were meeting the restricted-use recordkeeping requirements. Ninety-three percent indicated that they had or were going to adopt this practice.



The University of Iowa

Projects led by I-CASH core faculty and staff:

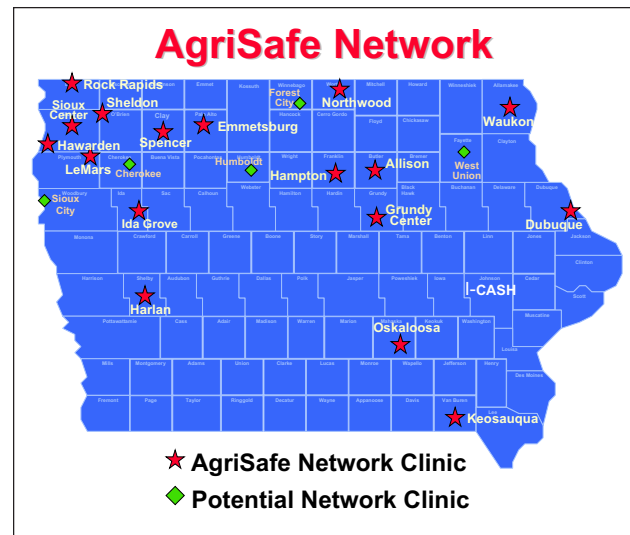
AgriSafe Network



The AgriSafe Network has had an exciting year of change. In June 2002, the Network became an incorporated non-profit organization. The Network's goal is to measurably increase access to preventive health and safety services and increase early detection of agriculturally-related health and safety problems. To fulfill its goal, the AgriSafe Network ensures all clinics have staff trained in agricultural health and safety providing preventive services within the clinical setting, at agricultural related events and agribusinesses, and in the agricultural environment. Activities this year include:

- *□ Presentations were given at the 2001 I-CASH Fall Meeting. Projects of the Rural Health Networking grant and a Children's Fire Safety program were reviewed.
- *□ The State Network meeting was held in Des Moines, IA on November 8, 2001. Fourteen AgriSafe Network clinics were represented by 17 clinicians.
- * In 2002, 6 nurses from Iowa completed the I-CASH Agricultural Occupational Health Training. After successfully completing the training, several existing clinics increased their staff or reestablished their clinic. One new clinic in Humbolt, Iowa was added to the Network site listing (see map). Additionally, seven health and safety professionals, who collaborate with AgriSafe clinics, also attended the training to enhance their knowledge in agricultural health and safety.
- *□ Four Network sites received funding to provide Certified Safe Farm services in their communities. They completed health screenings, on-farm reviews, and provided individualized educational sessions for 100 farmers.
- *□ For quality assurance purposes, the AgriSafe manual, occupational history form, and the clinic screening forms were all reviewed and revised to make them more useful as clinical and data resources.

The Network clinics strive to increase their outreach services for our Iowa farmers by providing educational outreach programs in their communities and by participating in their local county fairs and other community events. At the functions they provide educational materials, give partial health screenings, and sell personal protective equipment. AgriSafe continues to seek funding resources to expand our existing programs and to facilitate the development of new agricultural health and safety services.



Certified Safe Farm



Certified Safe Farm (CSF) is a voluntary, incentive-based project for farmers interested in improving their health and safety.

The primary project location is in Spencer, Iowa, with services provided by the AgriSafe Clinic of Spencer Hospital. CSF research and outreach activities began in 1998 with funding provided by NIOSH's Community Partners for Healthy Farming Intervention grant. This grant will continue until August 1, 2003, with 130 intervention farmers having received the occupational health screening and education, and on-site farm safety review once per year for five years.

This past project year, CSF staff has worked towards expanding the CSF program and increasing the number of Iowans who know about the project. Some accomplishments this past year include the following:

- *□ The Wellmark Foundation provided funding to extend CSF services to additional Iowa farmers. Ninety-two farm safety reviews and 94 occupational health screenings have been conducted on CSF farmers in the Hampton, Manchester, Ida Grove, and Dubuque, Iowa areas.
- *□ Three farm safety review trainings were held in Sioux City and Iowa City, Iowa to train people interested in conducting on-farm safety reviews as a part of the CSF program. The CSF farm safety review training will continue to be held at least once per year.
- *□ The Great Plains Center for Agricultural Health (GPCAH), based at the University of Iowa, received funding from NIOSH to implement the CSF project as it relates to dairy farms. This CSF Dairy Project will take place in Northeast Iowa, with 25 dairy farmers being enrolled for five years.
- *□ The AgriSafe Network, which currently comprises 25 rural clinics in Iowa that provide occupational health screenings for farmers and other agriculturally-related outreach services, has become a non-profit organization. The AgriSafe Network will be acting as the umbrella organization within which the CSF project will operate.
- *□ Magazine articles about the CSF program have appeared in: *Progressive Farmer*, *The Dubuque Telegraph Herald*, *The Ida County Courier*, *The Waterloo/Cedar Falls Courier*, *The Iowa City Press Citizen*, *Farm News* in Fort Dodge, and the *Farm Bureau Spokesman*. In addition, numerous presentations about the program have occurred throughout the state.

We will continue to garner national, state, and community-based support for the CSF program as we move from a research-based program to a business entity supported by insurers and agribusinesses that hold a vested interest in promoting the health and safety of U.S. farmers.

Farm Safety Youth Grant

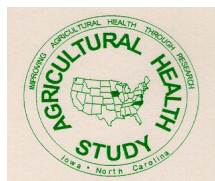
Each year I-CASH designates \$5,000 for community grants targeted at the prevention of farm-related injury in young people (less than 19 years of age). This year funds from the Injury Prevention in Agricultural Youth Grant were distributed to the following organizations:

- *□ *ISU Extension-Washington County Extension Council*. To provide a Farm Safety Day Camp aimed at youth ages 8-13, with follow-up activities for families.
- *□ *Farm Safety 4 Just Kids*. To develop farm safety educational resource packets (Tool Kits) to distribute in Iowa.
- *□ *Regional Medical Center - AgriHealth*. To supplement a countywide Safety Day Camp for children 3-14 years of age.
- *□ *Van Buren County Extension Service*. To offer a Farm Safety Day Camp for youth in grades K through 8.
- *□ *O'Brien County Agricultural Safety Day Camp Committee*. To provide an Agricultural Safety Day Camp for second graders in two school districts.
- *□ *Worth County Public Health*. To present information and demonstrations at the Worth County Fair on farm safety and health issues, and presentations on stress management.
- *□ *Agri-Safe Rural Neighbors*. To increase awareness of the risks on the farm, and risks with sun exposure through presentations to elementary schools, and county "Safety Days."
- *□ *Horn Memorial Hospital/ AgriSafe Clinic*. To hold a Farm Safety Day Camp aimed at youth ages 8-13, where there had not been a Farm Safety Day Camp previously in the area.
- *□ *Monona County Extension*. To provide farm safety education in the classroom of three different schools.
- *□ *ISU Extension Audubon County*. To offer an all day field trip for elementary students to a working farm with assistance from local FFA students.

I-CASH congratulates these recipients and we look forward to the success of their projects.

Agricultural health projects at other University of Iowa research centers:

Agricultural Health Study in Iowa



The Agricultural Health Study (AHS) is a prospective cohort study of agricultural exposures and chronic disease (especially cancer) in Iowa and North Carolina among commercial or private pesticide applicators and spouses of married private applicators. The National Cancer Institute is the primary source of funding. We are in the tenth year of the study. The first five years were devoted primarily to enrolling eligible subjects; 89,658 subjects were enrolled in the two states. In Iowa, 58,564 subjects were enrolled, exceeding our goal of 50,000. For the last several years, we have linked cohort members to Iowa mortality and incidence databases. As of March 2002, 1,136 deaths and 1,550 incident malignant cancers had been identified after enrollment. Cohort incidence/mortality analyses are underway with publications in preparation.

Currently, our primary activity consists of recontacting each cohort member to conduct a computer-assisted telephone interview (CATI) to update exposure information, obtain dietary health questionnaire data, and obtain buccal cells. We estimate it will take through 2003 to cycle through all private applicators and their spouses.

There are also several completed/ongoing/planned special studies that involve cohort members. More information about these studies, publications to date, and the Agricultural Health Study in general can be found at a new website, www.aghealth.org.

Center for Health Effects of Environmental Contamination (CHEEC)

The Center for Health Effects of Environmental Contamination (CHEEC) was established at the University of Iowa by the 1987 Iowa Groundwater Protection Act. The Center's mission is to "determine the levels of environmental contamination which can be specifically associated with health effects." CHEEC

supports and conducts research to identify, measure and prevent adverse health outcomes related to exposure to environmental toxins. The Center also organizes and participates in educational and outreach programs, provides environmental health expertise to local, state and federal entities, and serves as a resource to Iowans in the field of environmental health.

The Center designates a portion of its state appropriated funds to the CHEEC Seed Grant Program. This grant program is intended for projects that stimulate the growth or development of innovative lines of environmental research, provide for public education, or enhance the knowledge base of the professional environmental health community. CHEEC is comprised of faculty from the UI Department of Civil and Environmental Engineering, the UI College of Public Health, and The University of Iowa Hygienic Laboratory. Further information on CHEEC is available at www.cheec.uiowa.edu.

Center for International Rural and Environmental Health (CIREH)

CIREH's Fogarty International Center training program, which has focused mainly on Central and Eastern European countries, became involved in The Gambia, West Africa. Mr. Rex Kuye, Head of the College of Gambia School of Public Health, started his doctoral program in the department of Occupational and Environmental Health in January 2001. His research interests are in the area of rural and agricultural health and safety. Dr. Kelley Donham is serving as his advisor in the program.

In July 2001, CIREH began a new international internship program in The Gambia for undergraduate and graduate students. Dr. Shannon Marquez, CIREH Assistant Director for African Initiatives, and assistant professor in the Department of Occupational and Environmental Health, accompanied 20 students on a 6-week program that involved them in health-and environmental-health related research and intervention activities. More information about this program, including journal entries by the students while they were there, can be found at: www.public-health.uiowa.edu/Cireh/The%20Gambia.htm.

Environmental Health Sciences Research Center (EHSRC)



The University of Iowa Environmental Health Sciences Research Center (EHSRC) is one of 21 university-based Environmental Health Cores funded by the National Institute of Environmental Health Sciences (NIEHS). Established in 1990, the EHSRC is the only NIEHS center in the rural Midwest and the only center to focus on rural environmental exposures and related injuries and diseases. It is an interdisciplinary center promoting interaction and collaboration through its three research cores and five dedicated research facilities. Building on the University of Iowa's recognized strengths in health science, and environmental research, the EHSRC seeks to enhance ongoing research, initiate new collaborations, and serve as a resource to the state, the region and the nation in the area of agricultural and rural environmental health. EHSRC investigators include faculty members from Microbiology, Biostatistics, Occupational and Environmental Health, Internal Medicine, Epidemiology, and Pathology.

The EHSRC's Community Outreach and Education Core serves to channel the diverse environmental health capabilities of the Center and its affiliated research units at The University of Iowa toward meeting the needs of the community through educational support, health promotion and outreach. The Center also serves the upper Midwest as a technical resource to assist in environmental health policy making. In 2001, the Center was involved in a two-pronged effort to advance state policy to ensure the environmental safety of its citizens by (1) providing a needed open forum for the public, and (2) spearheading a six-month effort to complete a science-based assessment of this critically important public policy issue. The EHSRC Pilot Grant Program continues to play an important role in providing seed funding primarily to junior investigators who go on to compete for full funding with submissions to NIH, NSF, CDC, HUD, and a wide variety of foundations. Any faculty member with a research interest in environmental health consistent with the goals of the Center is eligible to apply for pilot project grant support.

Great Plains Center for Agricultural Health



The Great Plains Center for Agricultural Health (GPCAH) at The University of Iowa serves as the NIOSH Agricultural Health and Safety Center for Federal Region VII (Iowa, Missouri, Kansas, and Nebraska).

**GREAT
PLAINS
CENTER FOR
AGRICULTURAL
HEALTH**

G P C A H
continues to make
significant
progress in

advancing the knowledge of agricultural injuries and illnesses as well as intervention methods. The GPCAH is structured into four core areas.

Administration Core

Four feasibility projects were initiated: 1) collection of press clippings about farm and agricultural injuries to develop a system for evaluating and augmenting injury surveillance databases; 2) correlation of conference information to summarize recent progress in addressing agriculture health and safety issues; 3) a regional conference on agricultural behavioral health and safety to bring together individuals involved in mental health in rural areas of a seven state region; and 4) identification of data sources for agricultural injuries within Iowa and crafting of recommendations to improve agricultural injury surveillance.

Research Core

This year marked the end of the Keokuk County Rural Health Study's twelfth year of funding from CDC/NIOSH. Round 2 data collection continued throughout the year with 12-15 subjects examined and six to ten environmental surveys completed each week. Data has been collected on a total of 1,620 persons, representing 748 households. Data analyses continued on the Round 1 data - medical and environmental surveys collected from the 2,258 men, women, and children living in 1,004 households. Collaborations were established with other researchers to use the Keokuk County population as a study group. An investigation of the prevalence and risk factors for carpal tunnel syndrome (CTS) among farmers and non-farmers is being conducted in the prospective KCRHS.

Education and Outreach Core

The Education and Outreach Core supported a number of outreach activities including focus groups, press conferences, meetings, radio interviews, and public service announcements on agricultural health hazards.

Prevention and Intervention Core

Specific aims of the Prevention/Intervention Core were modified into two projects: 1) to reduce injuries and illnesses in dairy farming through the Certified Safe Farms for Iowa Dairy Farmers; and 2) to reduce childhood agricultural injuries through community-based interventions. In collaboration with the National Education Center for Agricultural Safety (NECAS) in Peosta, Iowa, research tools were developed and 25 dairy farms were recruited. In collaboration with Farm Safety 4 Just Kids an intervention project to prevent child farm injuries was initiated. Great Plains Center for Agricultural Health website is www.public-health.uiowa.edu/gpcah.

Injury Prevention Research Center

IPRC

Traumatic injury is a leading public health problem in Iowa with injuries being the leading cause of death among persons 1 through 44 years of age.

Since 1990, the University of Iowa Injury Prevention Research Center (UI IPRC) has been working to reduce the public health burden of injuries, with a focus on rural injury prevention. Iowans are at increased risk for unintentional injuries compared to persons living in more urban states and the UI IPRC is a national leader in researching ways to reduce the high number of preventable injuries that occur in rural communities. Faculty and staff from sixteen departments within the Colleges of Public Health, Medicine, Engineering, and Liberal Arts participate on research in the Center.

In addition to supporting research, the UI IPRC also serves as a national resource for rural injury prevention. The Center provides information, educational programs, and multi-disciplinary training in injury prevention and promotes the development of public policies to prevent and control injuries.

In September 2002, the UI IPRC received notification of renewed funding from the Centers for Disease Control (CDC). The successful grant application to the National Center for Injury Prevention and Control will result in \$4.5 million over five years. New research projects being initiated include 1) evaluating emergency medical services within Iowa; 2) comparing the effectiveness of various types of smoke detectors in rural home; 3) examining risk-taking behavior of children; and 4) studying the driving abilities of persons with sleep apnea syndrome.

IOWA FACE

Iowa Fatality Assessment & Control Evaluation Program

The Iowa Fatality Assessment and Control Evaluation Program (FACE) is a program carried out by the Department of Occupational and Environmental Health under a subcontract with the Iowa Department of Public Health using funds provided by the National Institute for Occupational Safety and Health (NIOSH). The FACE program collects basic information on all occupational fatalities in the state of Iowa and performs in-depth studies of specific types of fatal injuries. The goals of these investigations are to identify workplace fatalities and to alert employers, employees, and farmers about these risks. The investigators aim to make recommendations and develop programs to prevent similar occupational injuries. In addition, the alerts generated by the Iowa FACE project have been widely disseminated throughout the nation and descriptions of Iowa FACE investigations have been published in a variety of popular magazines aimed at specific trades and farmers, such as *Wallaces Farmer*, *Arbor Age*, *World of Welding*, and *American Towman*.

Traumatic occupational fatalities remain a serious public health concern in Iowa as well as the remainder of the country. During calendar year 2001 a total of 63 traumatic deaths while at work were identified. Workers in agriculture and construction continue to experience high number of fatal injuries in Iowa. Since January 2001 34.1% of the victims were employed in agricultural sector and 21.2% were in the construction trades.

I-CASH Affiliate Programs

The following are brief descriptions of Iowa farm safety and health programs and organizations that are associated with I-CASH and its mission of enhancing the health and safety of Iowa's agricultural community.

AgriWellness, Inc.



AgriWellness, Inc.

AgriWellness, Inc. provides administrative support and technical assistance to "Sowing the Seeds of Hope" projects in seven states (i.e., Iowa, Kansas, Minnesota, Nebraska, North Dakota, South Dakota and Wisconsin) to reduce stress and provide mental health services to the agricultural population. Funded by grants from the federal Office of Rural Health Policy and several foundations, these projects link farm crisis hotlines with counseling and other support resources in the seven states. During the past year nearly 3,000 farm residents have been connected with mental health services and more than 600 persons participated in educational retreats for farm families and support groups. AgriWellness also provides training to mental health professionals, physicians and the faith community about agricultural behavioral health. In 2003, AgriWellness is sponsoring a major conference on agricultural behavioral safety and health.

Easter Seals Rural Solutions



Creating solutions. changing lives.

The Easter Seals Rural Solutions program, formerly known as the Farm Family Rehabilitation Management (FaRM) program was developed in 1986 to address the technological and psychological needs of farm families affected by physical disabilities. The Rural Solutions program provides onsite rehabilitation services that promote the return to farming and the community, and increased independence. Services provided include adaptive equipment, modifications to the farm and home, secondary injury prevention education, equipment loan and community and peer support.

Easter Seals collaborates with Iowa State University Extension through the AgrAbility Project, and the Division of Vocational Rehabilitation Services to assist farm family members to remain in farming after a disability.

Farm Safety 4 Just Kids

Farm Safety



Just Kids

The mission of FS4JK is to promote a safe farm environment to prevent health hazards, injuries, and fatalities to children and youth.

In 2002, FS4JK chapters reached thousands of children, youth, and farm families with farm safety information. A chapter leadership conference was held in March with twenty-seven chapters from the United States, Canada and Australia attending the two-day event. Many chapters received recognition awards for their media involvement, volunteer hours, and dedication to farm safety.

In March, hundreds of farm safety advocates joined together to help celebrate 15 years of Farm Safety 4 Just Kids. The celebration included a reception, sessions on how to use FS4JK resources, networking with other volunteers, new programs/resources available, and the first ever FS4JK Ag Olympics. Staff members, volunteers, sponsors, board members, and farm safety advocates also enjoyed a presentation by Iowa Secretary of Agriculture, Patty Judge, and a special letter sent by President George W. Bush.

Topic Related Tool Kits

In 2002, farm safety specific area tool kits were designed with funds from I-CASH. The purpose behind the idea was to combine topic related materials to make conducting farm safety programs easier. Some of the safety topics include horses, livestock, chemicals, grain, machinery/tractor, and lawnmower, as well as age/ability appropriate tasks. Items such as riding helmets and personal protective equipment are also included.

Farm Family Incentive Grants

For the eighth year, *Successful Farming* magazine and Farm Safety 4 Just Kids have conducted a farm family incentive grant program. The program encourages safety improvements on the farm. The applications are screened by FS4JK and the winners receive up to a \$250 award to make their improvements.

Iowa Governor's Traffic Safety Bureau

Sixteen Iowa sites conducted the FS4JK rural roadway safety program, *Buckle Up or Eat Glass* tough choice, huh? This is the third year for the program in Iowa through the Iowa Governor's Traffic Safety Bureau. Youth groups organized an educational program, a seat belt check up of pickup trucks, and conducted a media campaign.

Buckle Up Manual

Funds were used through the National Highway Traffic Safety Administration to create a comprehensive manual to help guide community leaders through a Buckle Up or Eat Glass rural roadway safety program.

104! No More!

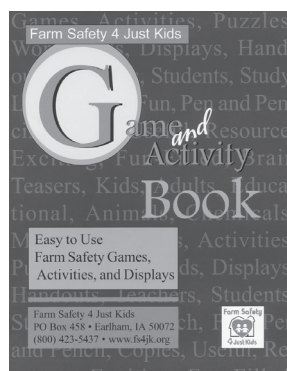
A national awareness campaign was launched in Washington, DC. Nearly 104 people attended the program at the White House hosted by FS4JK. Twenty-three different communities also initiated the campaign across the US with 104 or more children during Farm Safety and Health Week.

Generations of Safe and Healthy Farmers

FS4JK applied for a grant to conduct the generational farm safety program training through the United States Department of Agriculture. The purpose of the grant is to train community members to facilitate the program which incorporates storytelling and farm safety awareness for two different generations at risk.

Educational Resources

In 2002, FS4JK added three very unique items to help teach farm safety. The FS4JK Game Book, which includes games, paper and pencil activities, and plans to build your own displays. The second resource, a joint effort between the National Children's Center, FS4JK, and the Migrant Health Clinicians, was *Aunque Cerca Sano*, a Spanish book geared for parents to teach their children about the dangers of pesticides. The third resource, funded through the Iowa Love Our Kids License Plate Fund, is a growth chart for little ones entitled, *Keep Me Safe and Watch Me Grow!* It was distributed throughout Iowa elementary schools, daycares and the FS4JK chapter network.



FS4JK Gamebook Cover

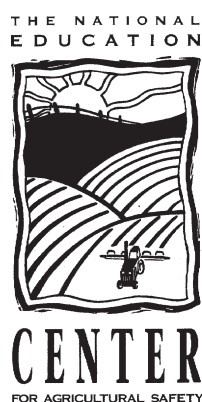
Iowa Farm Safety Council

The Iowa Farm Safety Council was once again very busy in 2001-2002. The Council remains a grass roots effort supported by a network of professionals in agricultural production, education, insurance, industry, and government working toward a common goal of preventing injuries and illnesses in rural Iowa.

An accomplishment the council continues to be very proud of is the Iowa Fire Prevention Poster Contest. Each year 3rd-6th graders from around Iowa are asked to submit posters that warn of fire hazards and identify prevention techniques. Hundreds of children from across Iowa participate in the program each year. We now have second generation children participating in this very worthwhile program. With the support of the State Fire Marshall, Iowa Firemen's Associations, and many industry and insurance leaders, the Council continues to provide this educational program for the children of Iowa.

The council also supports other educational activities designed to promote good safety and health practices. For example, each year the Council has a visible presence at both the Iowa State Fair and the Iowa Power Farming and Machinery Show. As we look towards the future, we will continue to work to make rural Iowa a safer and healthier place to live and work.

National Education Center for Agricultural Safety



The National Education Center for Agricultural Safety (NECAS), located in Peosta, Iowa celebrated it's five year anniversary in October. NECAS has received funding from the United States Department of Agriculture (USDA) and is supplemented by financial support from other organizations and agencies. NECAS recognizes the importance of reaching at-risk agricultural audiences across the nation with effective agricultural safety and health programs and resources.


The NECAS staff provided hands-on training to the youth by offering three Progressive Farmer Farm Safety Day camps, two FFA "Fall Harvest Safety Day" programs, three days of "Surviving Summer Safely"

field trips, and offered many other classes throughout the year. NECAS is working with area firefighters and EMS providing training, hosting simulator classes and taking some of their training classes "on the road" for those departments that cannot leave their posts unattended.

Another project being worked on in partnership with the Great Plains Center of the University of Iowa is "Certified Safe Farms" a voluntary agricultural health and safety program that addresses the hazards of farming and the need to reduce illnesses and injuries on farms. Additionally, USDA has awarded a grant to the National Safety Council/NECAS, Penn State and Ohio State for the planning, implementation and evaluation of a tractor certification program for youth, which is a three year initiative.



Attendees of a Progressive Farmer Farm Safety Day Camp received straw hats to promote sun safety.

PROTEUS  Proteus, Inc. is a not-for-profit organization that since 1990 has operated the BPHC-funded Migrant Health Project in the state of Iowa. From offices located in Des Moines, Fort Dodge, and Muscatine, Proteus provides outreach, home visits and clinics around the state where migrant and seasonal farmworkers are found. Since the migrant farmworker population in Iowa that works with crop-related tasks has decreased significantly within the past 5-6 years, Proteus' funding has decreased.

Proteus spent a very busy 2002 migrant season and even found a few new pockets of farmworkers in places where we hadn't seen them previously. Through the end of August, Proteus had served 1,292 farmworker users. The summer's weather conditions resulted in a very short migrant season where workers often put in 14 hour work days, seven days a week in order to get the corn detassled.

After farmworker families are certified as eligible, Migrant Health Aides conduct Health Histories by lifecycle. Farmworker family members are seen by the PA, volunteer providers or contracted providers. The Migrant Health Aides attempt to conduct some educational activities as well as follow-up after a provider sees a farmworker. Proteus conducts clinics at sites such as migrant camps, employer sites, motels and other living sites, etc. This summer we also continued conducting home visits when it could be determined that multiple farmworker families resided in clusters within a larger community. In this way, contact was made with each and every family member, increasing the number of patients seen by Proteus. Many farmworkers are found to have untreated hypertension and diabetes, many never see a dentist until a tooth needs to be extracted, and they may lack other lifecycle-specific medical screening procedures.

Proteus was able to mobilize 916 hours of volunteer medical providers this summer. Volunteers ranged from U of I Pediatric Dentistry staff and students, U of I MECO students, PA students from Des Moines University, and other providers from around the Iowa City area.

Sharing Help Awareness United Network (SHAUN)

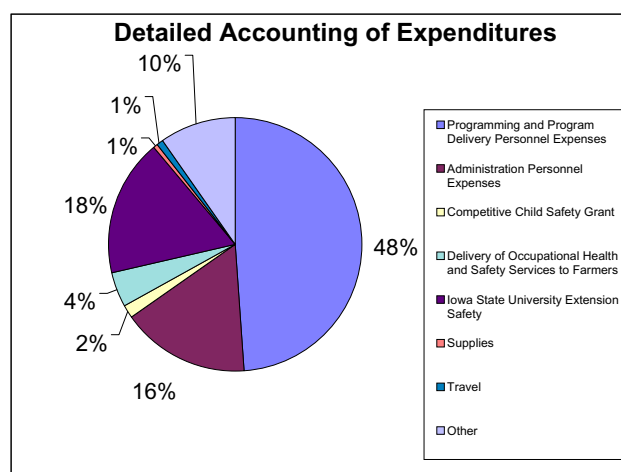
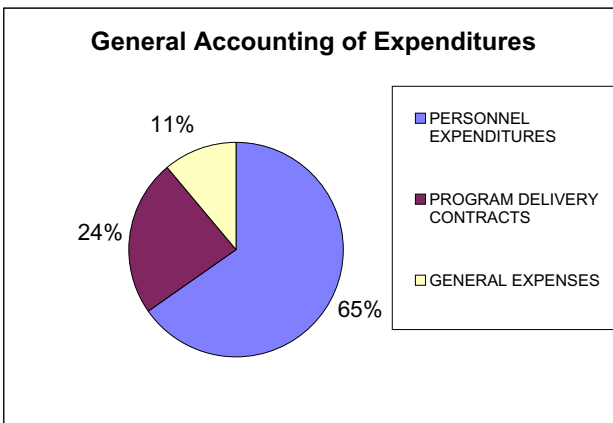


SHAUN (Sharing Help Awareness United Network) leaders and outreach workers continue to provide support to farmers, farm workers, and their families who have experienced a death, disability, or loss in farming. Educational resources, referrals, and peer support help families cope with financial, emotional, health, spiritual, and grief issues. SHAUN staff participated in the National Workplace Safety Summit, attending meetings in Reno, Nevada and Washington DC. Locally SHAUN staff attended Rural Advocacy 2003 meetings. Outreach Coordinator, Jill Berends, participates as a member of the Iowa Disaster Human Resource Council. President, Jeris Petersen, participated in the Farm Aid training in natural disaster relief in Madison, Wisconsin and continues to be involved as a farm safety advocate, working with Extension in tractor safety courses and farm safety day camps. SHAUN staff also traveled to Washington, DC to participate in Farm Safety and Health Week. The SHAUN website is www.shaunnetwork.org.

Financial Report

The I-CASH budget consists of state funds, (\$255,978 FY 2002) plus competitive grant and contract funds, (\$ 2,023,817 for the period 1999-2006). The following table and graphs depict the state appropriated fund expenditures. Expenditures are divided into three areas: 1) personnel expenditures for programming and administration; 2) program delivery contracts; and 3) general expenditures.

PERSONNEL EXPENDITURES			
	Total I-CASH Effort	Budget Dollars	Actual Dollars
Programming and Program Delivery	75%	129,239	125,270
Administration	25%	43,080	41,756
Total		172,319	167,026
PROGRAM DELIVERY CONTRACTS			
Competitive Child Safety Grant		5,000	4,600
Delivery of Occupational Health and Safety Services to Farmers		11,000	11,000
Iowa State University Extension Safety		45,000	45,000
Total		61,000	60,600
GENERAL EXPENSES			
Supplies		1,000	1,632
Travel		2,000	2,177
Other: Includes computer system support, required semiannual meetings, outreach materials, annual report, telephone, and newsletters		19,659	24,543
Total General Expenditures		22,659	28,352
TOTAL BUDGET		255,978	255,978



The following are grants and contracts that I-CASH faculty and staff have successfully competed for to conduct intervention and research activities in Iowa:

Ag. Ed. and Outreach Components of the Great Plains Center (CDC, NIOSH)	\$ 482,706 (2001 - 2006)
Certified Safe Farm Dairy Project (CDC, NIOSH)	227,910 (2001 - 2006)
Certified Safe Farms (CDC, NIOSH)	540,070 (1999 - 2003)
Comprehensive Assessment of Rural Health in Iowa (CDC, IDPH)	504,000 (2002 - 2003)
Iowa / Nebraska Certified Safe Farm (Pioneer Hi - Bred International)	20,000 (2002 - 2002)
New Frontiers: Certified Safe Farm Expansion (Wellmark)	48,919 (2001 - 2002)
Ag. Occupational Safety and Health Training - Component of the Heartland Center for Occupational Health and Safety (CDC, NIOSH)	105,088 (2001 - 2003)
Physicians Assistant Training Grant (Bureau of Health Professions)	95,124 (2001 - 2003)
Total:	\$ 2,023,817

Appendix A

I-CASH Presentations / Newspaper Publications

July 2001

Agricultural machinery rescue class. LaMar Grafft. July 14-15; Runnells, IA.

Agricultural safety display and booth at Johnson County Fair. I-CASH Staff. July 23-26; Iowa City, IA.

"Certified Safe Farm - Development and evaluation of the on-farm safety review process." Risto Rautiainen. The American Society of Agricultural Engineers 94th International Meeting. July 29-August 1; San Diego, CA.

September 2001

Certified Safe Farm reviewer training. I-CASH staff. September 15-16; Sioux City, IA.

"Kids learn facts about farm safety: National Safety Week begins today." Susan Thompson, The Gazette, September 16, 2001.

"Mystery club teaches young people farm safety." Susan Thompson, Agriculture in Action Notes from ISU. September 13, 2001.

"Sewing [misspelled] seeds of safety: Manchester hospital, U of I join to fight ag hazards." Matthew Wilde. Waterloo/Cedar Falls Courier, September 9, 2001.

October 2001

"Accident investigation methods." Risto Rautiainen and Wayne Johnson. IREH Seminar presentation. October 11; Iowa City, IA.

"Anthrax it's ecology and possible use in bioterrorism." Kelley Donham. Occupational and Environmental Health Seminar, University of Iowa. October 11; Oakdale, IA.

"Certified safe." Kristin Danley-Greiner. Fort Dodge Farm News, October 26, 2001.

"Check your SMV knowledge: This emblem saves lives and costly equipment." Charles Schwab, Progressive Farmer Vol. 116 No. 11 October, 2001.

"Occupational skin diseases of agricultural workers." Kelley Donham. Agricultural Health and Safety Class, The University of Illinois. October 1; Urbana, IL.

"Posttraumatic stress disorder and occupational stress." C.J. Hodne. The Residency Advisory Committee for the Occupational Health Residency Program, Department of Occupational and Environmental Health, University of Iowa. October 30; Iowa City, IA.

"Youth farm worker is killed in a PTO driveline entanglement." Risto Rautiainen and Wayne Johnson. IREH Seminar presentation. October 13; Iowa City, IA.

November 2001

"Agricultural injuries and occupational diseases in Finland." Risto Rautiainen. IREH Seminar presentation. November 6; Iowa City, IA.

"Certified Safe Farm - farm review." Risto Rautiainen. Certified Safe Farm Training. November 29; Iowa City, IA.

"Certified Safe Farm project results." Sara Schneiders. The I-CASH Fall Meeting. November 8-9; Des Moines, IA.

"Community health issues relative to livestock production." Kelley Donham. The Governors Safety Conference. November 1; Des Moines, IA.

"Mortality and morbidity in agriculture in the United States." Risto Rautiainen and Steve Reynolds. The I-CASH Fall Meeting. November 8; Des Moines, IA.

National Education Center for Agricultural Safety (NECAS) Farm Safety Workshop. Kelley Donham. Certified Safe Farm Training. November 14; Peosta, IA.

"Neighbor health hazards regarding large scale livestock production." Kelley Donham. Confinement Animal Feeding Operation Town Meeting. November 15-16; Des Moines, IA.

"Posttraumatic stress disorder: Causes, prevention, and treatment." C.J. Hodne. The I-CASH Fall Meeting. November 8-9; Des Moines, IA.

December 2001

"Current issues in agricultural medicine." Kelley Donham. The National Education Center for Agricultural Safety. December 5; Peosta, IA.

Recruitment and project awareness presentation to Northeast Iowa Dairy Association. Risto Rautiainen, LaMar Grafft and Sara Schneiders. Dec 12; Calmar, IA.

January 2002

"Agricultural Medicine: Zoonotic diseases." Kelley Donham. Carl Clinic Center for Rural and Agricultural Health. January 18; Urbana, IL.

"Community health issues associated with large livestock production." Kelley Donham. Kansas State University Agricultural Dust Conference. January 7-9; Manhattan, KS.

Farm Trauma/Farm Safety. LaMar Grafft. Spencer Municipal Hospital. January 10-11; Spencer, IA.

"Zoonotic and respiratory hazards in agriculture " Kelley Donham. Spencer Municipal Hospital. January 10-11; Spencer, IA.

February 2002

Certified Safe Farm introductory presentation to assist in recruiting farmers. LaMar Grafft. AgriSafe Rural Neighbors-Butler County Public Health. February 23; Allison, IA.

"Environmental and health concerns with large scale livestock production." Kelley Donham. Broadlawns Medical Center. February 5; Des Moines, IA.

March 2002

"Agricultural trauma and safety." LaMar Grafft. Floyd Valley Hospital. March 19; LeMars, IA.

"Crashes between farm vehicles, motorists on upswing." Barbara McManus, The Fort Dodge Messenger, March 22, 2002.

"Farm Safety." LaMar Grafft. LeMars Middle School. March 19; LeMars, IA.

"Grant boosts local farm safe program." Ida County Courier, March 20, 2002.

I-CASH/Certified Safe Farm exhibit. Sara Schneiders. Iowa Public Health Association (IPHA) Conference. March 26, 27; Ames, IA.

Manure pit rescue class. LaMar Grafft. LeMars Fire Department. March 19; LeMars, IA.

"Update on agricultural health issues worldwide." Kelley Donham. The International Commission on Occupational Health. March 4; Rome, Italy.

April 2002

"Agricultural trauma." LaMar Grafft. I-CASH Agricultural Occupational Health Training. April 24-26 and June 12-14; Iowa City, IA.

"Certified Safe Farm Project." The Iowa State Association of Counties. April 2002.

"Certified Safe Farm recent results." Sara Schneiders. I-CASH Agricultural Occupational Health Training. April 24-26 and June 12-14; Iowa City, IA.

"Rural health and agricultural medicine", "Zoonotic diseases", "Veterinary pharmaceuticals, biologicals and antibiotics", "Rural environmental health problems " "Agricultural skin diseases", "Agricultural respiratory hazards." Kelley Donham. I-CASH Agricultural Occupational Health Training. April 24-26 and June 12-14; Iowa City, IA.

May 2002

"Agricultural health and safety measures "Policy for The Gambia." Kelley Donham. The Gambia College. May 29; The Gambia, West Africa.

"New agricultural safety and health award." Julie Todd, Integrated Crop Management newsletter, Iowa State University Extension, IC-488(9):78-79. May 20, 2002.

June 2002

"Agricultural toxicology." Kelley Donham. I-CASH Agricultural Occupational Health Training. June 26-28; Iowa City, IA.

Certified Safe Farm poster presentation. Sara Schneiders. NIFS Annual Conference. June 23-27; Ponte Vedra Beach, FL.

"Cost of agricultural injuries and illnesses in agriculture in Finland." R. Rautiainen, C. Zwerling, K. Donham, L. Burmeister, N. Sprince, R. Ohsfeldt, S. Reynolds, E. Eskola, P. Saarimaki, T. Siitonen. The American Industrial Hygiene Conference and Expo. June 1-6; San Diego, CA.

"Cost of agricultural injuries and occupational diseases in Finland." R. Rautiainen, C. Zwerling, L. Burmeister, R. Ohsfeldt, N. Sprince, K. Donham, S. Reynolds, E. Eskola, T. Siitonen, P. Saarimaki. The National Institute for Farm Safety Conference. June 23-27; Ponte Vedra Beach, FL.

"Establishing an AgriSafe Clinic " Carolyn Sheridan. I-CASH Agricultural Occupational Health Training. June 26-28; Iowa City, IA.

"Rural and environmental health." Kelley Donham. Summer Institute Presentation, June 17-28; Slovak Republic.

"Skin problems in agricultural workers." Kelley Donham. Visiting Professorship Program, St. Mary's Hospital. June 18; Sioux City, IA.

Appendix B

I-CASH Publications

- Donham K.J., D. Cumro, and S. Reynolds. 2002. Synergistic effects of dust and ammonia on the occupational health effects of poultry production workers. *J Agromedicine* 8(2): 57-76.
- Donham K.J., and J.F. Storm. 2002. "Agriculture at risk: A report to the nation" - A historical review, critical analysis, and implications for future planning. *J Agric S & H* 8(1): 9-35.
- Donham K.J., P.S. Thorne, G.M. Breuer, W. Powers, S. Marquez, and S.J. Reynolds. 2002. Exposure limits related to air quality and risk assessment. In *Iowa Concentrated Animal Feeding Operations Air Quality Study*, by the Iowa State University and The University of Iowa Study Group. Iowa City: University of Iowa Press, 164-183.
- Flora J.L. and Hodne C.J. (lead co-authors), W. Goudy, D. Osterberg, J. Kliebenstein, K.M. Thu, and S. P. Marquez. 2002. Social and community impacts. In *Iowa Concentrated Animal Feeding Operations Air Quality Study*, by the Iowa State University and The University of Iowa Study Group. Iowa City: University of Iowa Press, 147-163.
- Freeman S.A., and C.V. Schwab. 2002. The role of volunteer farm safety organizations: A case study of the Iowa Farm Safety Council. National Institute for Farm Safety International Summer Meeting, Ponte Vedra Beach, Florida. NIFS Paper No. 2002-04. NIFS Columbia, MO.
- Guo C., J. Stone, H.M. Stahr, and M. Shelley. 2002. Cleanup of gloves contaminated with granular terbufos and tefluthrin. *Archives of Environmental Contamination and Toxicology*, 42: 383-388.
- Holland R.E., T.L. Carson, and K.J. Donham. 2002. Adverse health effects: Animal health effects. In *Iowa Concentrated Animal Feeding Operations Air Quality Study*, by the Iowa State University and The University of Iowa Study Group. Iowa City: University of Iowa Press, 115-120.
- Madsen M.D. [Editorial] 2002. A complementary strategy to reduce tractor overturn fatalities: Sell more new tractors and retire the old ones. *J Agric S&H*, Spring.
- Marnio S., and C.V. Schwab. 2001. Safety: Reaching youth today for tomorrow's well-being. National Association of Extension 4-H Agents 55th Annual Conference Proceedings, Bismark, North Dakota. October 21-25.
- Merchant J.A., J. Kline, K.J. Donham, D.S. Bundy, and C.J. Hodne. 2002. Adverse health effects: Human health effects. In *Iowa Concentrated Animal Feeding Operations Air Quality Study*, by the Iowa State University and The University of Iowa Study Group. Iowa City: University of Iowa Press, 121-145.
- Radon K., B. Danuser, M. Iversen, R. Jorres, E. Monso, U. Opravil, C. Weber, K.J. Donham, and D. Nowak. 2001. Respiratory symptoms in European animal farmers. *Eur Respir J* 17: 747-754.
- Radon K., B. Danuser, M. Iversen, E. Monso, C. Weber, J. Hartung, K. Donham, E. Palmgren, and D. Nowak. 2002. Air contaminants in different European farming environments. *Annals of Agricultural and Environmental Medicine* 9(1): 41-48.
- Rautiainen R. 2002. Agricultural injuries and occupational diseases in agriculture in Finland; Cost, length of disability and preventive effect of a no-claims bonus. Ph.D. diss., The University of Iowa.
- Rautiainen R.H., and S.J. Reynolds. 2002. Mortality and morbidity in agriculture in the United States. *J Agric Safety & Health* 8(3): 259-276.
- Schneiders S., K.J. Donham, P. Hilsenrath, N. Roy, and K. Thu. 2001. Certified Safe Farm: Using health insurance incentives to promote agricultural safety and health. *J Agromedicine* 8(1): 25-36.
- Schwab C.V., and S.A. Freeman. 2002. Agricultural systems technology pre-professional's perceptions of agricultural hazards and practiced safety behaviors. National Institute for Farm Safety International Summer Meeting, Ponte Vedra Beach, Florida. NIFS Paper No. 2002-02. NIFS Columbia, MO.
- Stone J. 2002. *Shirts & Stuff for Sun Safety*. Pm-1862, ISU Extension, Revision, May.
- Stone J. 2002. *Safe Farm: Keep Gloves Handy for Pesticide Work*. Pm-1518e. ISU Extension, Revised, January.
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- Whitford F., J. Stone, and T. MacMillian. 2001. Chapter 11. Personal protective equipment: Selection, care, and use. In *The Complete Book of Pesticide Management*. John Wiley & Sons, Inc.

Iowa AgriSafe Network Directory

Ag Health and Safety Center - Van Buren County Hospital
PO Box 70
Keosauqua, IA 52565
Nurse Directors: Dixie Daugherty and Denise Carlson
Ph: 319-293-3171

AgriCare - Veterans Memorial Hospital
401 1st Street SE
Waukon, IA 52172
Nurse Directors: Diane Butikofer / Jeff Mitchell
Ph: 563-568-3411

AgriSafe - Floyd Valley Hospital
Hwy 3 East / Box 10
LeMars, IA 51031
Nurse Director: LaVonne Galles
Phone: 712-546-3450

Agri-Safe - Hawarden Community Hospital
1111 11th Street
Hawarden, IA 51023
Nurse Director: Dee Meerdink
Ph: 712-551-3127

AgriSafe - Sioux Center Community Hospital and Health Center
605 South Main Avenue
Sioux Center, IA 51250
Nurse Director: Lori Kleyer
Ph: 712-722-8188

AgriSafe Occupational Health Services - Spencer Hospital
1200 First Avenue East
Spencer, IA 51301-4330
Nurse Director: Carolyn Sheridan
Ph: 712-264-6107 or 888-424-4692

AgriSafe Rural Neighbors - Butler County Public Health
428 6th Street / PO Box 325
Allison, IA 50602
Nurse Director: Linda Truax
Ph: 319-267-2934 or 800-873-0191

AgriSafe Rural Neighbors - Franklin County Public Health
1600 Central Avenue East
Hampton, IA 50441
Nurse Director: Jean Hirth
Ph: 641-456-5820

AgriSafe Rural Neighbors - Grundy County Home Care Services
802 1st Street
Grundy Center, IA 50638-2030
Nurse Directors: Gloria Dielschneider and Carol Heetland
Ph: 319-824-6312

Horn Memorial Hospital
701 East 2nd Street
Ida Grove, IA 51445
Nurse Director: Sandy Lacey
Ph: 712-364-3311

Merrill Pioneer Community Hospital
801 S Greene Street
Rock Rapids, IA 51246
Nurse Director: Linda Katt
Ph: 712-472-2591 ext. 128

NECAS
10250 Sundown Road
Peosta, IA 52068
Nurse Director: Charlotte Halverson
Ph: 563-557-0354 ext. 374

Northwest Iowa Health Center
118 N 7th Avenue / PO Box 250
Sheldon, IA 51201
Nurse Director: Jean Boone
Ph: 712-324-6402

Occupational Health - Mahaska Health Partnership
1308 17th Ave E
Oskaloosa, IA 52577
Nurse Director: Lynn Armstrong
Ph: 641-672-3417

Occupational Health Outreach - Myrtue Memorial Hospital
1213 Garfield Avenue
Harlan, IA 51537
Nurse Director: Sue Hough
Ph: 712-755-4288

Palo Alto County Health System
3201 First Street
Emmetsburg, IA 50536
Nurse Director: Mary Kay Nissen
Ph: 712-852-5469

Rural Health and Safety - Mercy Medical Center
250 Mercy Drive
Dubuque, IA 52001
Nurse Director: Charlotte Halverson
Ph: 800-637-2920 or 563-589-8111

Worth County Public Health
100 Enterprise Drive / PO Box 228
Northwood, IA 50459
Nurse Director: Betty Chapin
Ph: 641-324-1741